

Redescription of *Cleptes galloisi* (Hymenoptera: Chrysididae: Cleptinae) in Korea

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ABSTRACT

The rare species, *Cleptes galloisi* Uchida, is redescribed based on the type material. In addition, male characters hitherto unknown are given with newly found specimens from Korea. Digital images of both sexes are provided.

Key words: Chrysididae, *Cleptes galloisi*, redescription

INTRODUCTION

Cleptes galloisi Uchida 1926 is one of very poorly known Chrysidid species. The original description was broadly comparable to generic features, thus did not provide diagnostic value for species identification (Tsuneki, 1959). Furthermore, the type depository has been unknown, and no later researchers have been able to examine this species (Kimsey and Bohart, 1990; Terayama et al., 2005).

One of authors (JKK) fortunately found the type of *C. galloisi* in The Hokkaido University Museum, Japan this year. In addition, we have found the male specimens of this species in Korea. In this study, we provide redescription of the holotype and new description of male. Digital images for diagnostic features are also given.

Morphological terminology mainly followed Kimsey and Bohart (1990). All measurements were taken as the maximal length of the part being taken under image analyzer (TOMORO digital imaging). Body length was measured from the anterior margin of head to the posterior end of metasoma. We used three comparative terms to explain puncture distribution: sparse (punctures spaced distantly, usually separating one another by two or three times as long as puncture diameter), moderate (punctures spaced by the puncture diameter), and dense (punctures spaced closely, usually punctures touching one another).

SYSTEMATIC ACCOUNTS

¹**Cleptes galloisi* Uchida

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Cleptes galloisi Uchida, 1926, pp. 183-185, ♀, Séoul, Corée (The Hokkaido University Museum, Japan); Tsuneki, 1959, p. 5 (in key), 12-13; Kimsey and Bohart, 1990, p. 60 (listed, with erroneous record of type locality as Japan); Ha et al., 2008, p. 72 (listed).

Material examined. ♀, Séoul, Corée [Seoul, Korea], 11 Jun. 1919, Edme Gallois (holotype); 3♂♂, Chungcheongnam-do, Daejeon-si, Dong-gu, Campus of Daejeon Univ., 11 May-5 Jun. 2006 J.W. Lee (Malaise trap).

Description. *Female* (holotype). Body length 6.5 mm (Fig. 1A). Wing length 4.3 mm (Fig. 1B). Entire body with long suberect to erect pale yellow hairs moderately set; antennal flagella with dense short erect hairs.

Coloration. Frons, clypeus, antennal scape and basal 2/3 of mandible metallic green (remaining apical 1/3 ferruginous). Vertex, gena and larger part of mesosoma greenish blue, with partly violet. Mesopleuron, metanotum, lateral part of propodeal dorsum, upper part of propodeal lateral face, all coxae, all femora, and hind tibiae metallic green. Ground color of metasoma black, but partly greenish and violet; median part of anterior sloping face of tergum I brownish, and posteromedian parts of terga I-IV ferruginous.

Head. Transverse, in frontal view, ca. 1.40 X as broad as long (Fig. 1B); seen from above, ca. twice as broad as long (Fig. 1C). Frons slightly convex, with large moderate to dense punctures. Ocellar region and vertex with smaller (than those of frons) moderate punctures. Oculo-ocellar distance (OOD) ca. 1.54 X as long as posterior ocelli distance (POD); posteriorocelli-occipital carina distance (OCD) ca. 1.50 X as long as OOD. Median longitudinal frontal furrow shallow, but well-discernible almost up to anterior ocellus (but not touching anterior ocellus). Gena almost parallel behind eye, and approximately half as broad as eye in broadest portion.

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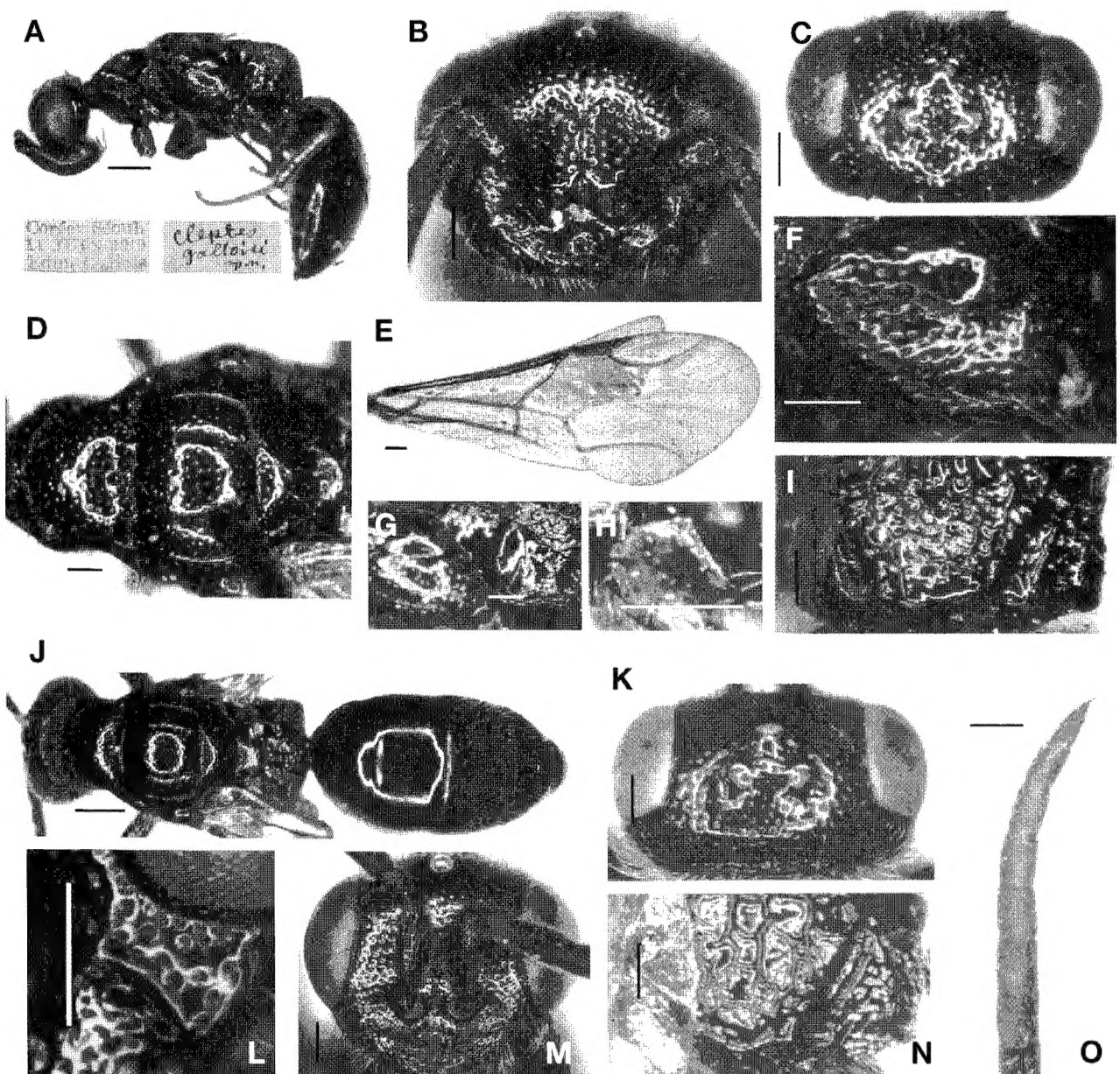


Fig. 1. *Cleptes galloisi*, ♀ (holotype, A-I), ♂ (J-O). A, General habitus, in profile, with associated labels; B, Head in frontal view; C, Head in dorsal view; D, Mesonotum in dorsal view; E, Forewing; F, Mesopleuron; G, Propodeal lateral face showing smooth area; H, Apophysis of hind coxa; I, Propodeal dorsum; J, General habitus in dorsal view; K, Head in dorsal view; L, Malpian space; M, Head in frontal view; N, Propodeal dorsum; O, Antennal flagellum with tyloids. Scale bars=0.5 mm (A, J), 0.2 mm (B-I, K-O).

Malarspace transverse, ca. twice as broad as long. Clypeus with dense punctures; its apicomedian production ca. 1.40 X as broad as long, lateral margins slightly divergent (trapezoid in shape), with very shortly spinous at its apicolateral corners; subantennal space very short. Antennal scape 1.70 X as long as flagellum III; antennal flagellum III ca. 2.10 X as long as broad, and 1.40 X as long as flagellum IV; antennal flagella V-XI subequal in length; last flagellum some-

what tapering, 2.70 X as long as broad.

Mesonotum. Pronotal dorsum moderately punctate, with two foveolate sulci in both basal and posterior marginal parts ("bisulcate" in Tsuneki, 1959); pronotal lateral face almost impunctate, and its posterior half somewhat deeply depressed; pronotal lateral margins between sulci, seen from above, slightly divergent, and ca. 1.63 X as broad as long (Fig. 1D). Mesonotum, scutellum and metanotum with sparse punctures

that almost same as ones on pronotal dorsum in size and density (Fig. 1D). Epicnemium densely sculptured. Mesopleuron with moderate punctures. Scrobal sulcus being formed by contiguous large punctures, and connected with epicnemial border sulcus without interruption (Fig. 1F). Subalar fossa well-excavated throughout mesopleuron, and tapering. Metapleuron, except for uppermost sculptures, impunctate and polished. Propodeal dorsum irregularly and loosely reticulate (Fig. 1I); lateroposterior propodeal corner obtusely angled (Fig. 1I); posterior half of propodeal lateral face reticulate (especially in upper half) and carinate, but anterior half smooth without any sculpture (Fig. 1G). Apophysis of hind coxa low, and its tip obtusely angled (Fig. 1G). Forewing as in Fig. 1E.

Metasoma. Tergum I almost impunctate; tergum II-IV with regular moderate to dense punctures.

Male. Structurally as much in female except for following details. Body slightly shorter, ca. 6.0 mm long, and forewing 4.1 mm long (Fig. 1J). Head in frontal view less transverse as in Fig. 1M; seen from above, ca. 1.40 X as broad as long (Fig. 1K). OOD ca. 1.60 X as long as POD; OCD ca. 1.62 X as long as OOD. Aipcomedian production of clypeus ca. 1.70 X as broad as long. Antennal flagellum III ca. 2.4 as long as broad; flagella VI-XIII with large (almost covering with lower parts) brown tyloids; apical part of last segment compressed and flattened (Fig. 1O). Reticulation on propodeal dorsum looser (Fig. 1N). Pronotum bluish violet; brownish area in anterior sloping face of tergum I reduced, almost lacking.

Distribution. Korea.

Taxonomic Notes. The crucial characteristics of this species, "Mesonotum almost impunctate", proposed by Tsuneki (1959: 5, in key) was erroneous, as shown in above description and Fig. 1D and 1J. In our pilot comparison with other

Korean species, impunctate and polished anterior part (pre-spiracle area) of lateral propodeal face is the most distinct feature in this species.

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